

CLAIMS

1. A discharge lamp device comprising:

5 an airtight container filled with a discharge medium mainly including noble gas;

 a first electrode provided in the airtight container;

 a second electrode that includes an opening through which light emitted from the airtight container is emitted, that is provided to have a predetermined
10 interval to the airtight container, and that includes a reflective surface; and

 an insulating holder that is externally attached to the airtight container and that maintains the predetermined interval.

2. The discharge lamp device according to Claim 1, wherein:

15 the holder includes a penetration hole to which the airtight container is inserted and includes a protrusion at a position at which the second electrode is provided; and

 the second electrode includes a fitting hole fitted with the protrusion of the holder.

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3. The discharge lamp device according to Claim 2, wherein:

 a relation between a length a of the holder in a direction along which the airtight container is inserted and a length b of the protrusion in the insertion direction is determined to be $a > b$.

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4. The discharge lamp device according to Claim 2 or 3, wherein:

 a length a of the holder in a direction along which the airtight container

is inserted is determined such that a relation between length a_1 at a side from which the airtight container emits light and length a_2 at a side at which the second electrode is provided is $a_1 < a_2$.

5 5. The discharge lamp device according to Claim 1 or 2, wherein:

the holder is made of transparent material and is formed to have the same length as that of the airtight container.

6. The discharge lamp device according to Claim 5, wherein:

10 the second electrode is buried in the holder to have a predetermined interval to the airtight container.

7. A discharge lamp device comprising:

15 an airtight container filled with a discharge medium mainly including noble gas;

a first electrode provided in the airtight container;

a second electrode buried in the holder to have a predetermined interval to the airtight container;

20 an insulating holder that is made of transparent material to have the same length as a length of the airtight container and that includes a penetration hole to which the airtight container is inserted; and

a reflection member that includes an opening through which light emitted from the airtight container is emitted and that is externally provided to the second electrode.

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8. The discharge lamp device according to any one of Claims 1 to 7, wherein:

the holders are arranged to be parallel to one another and corners at a

side at which light emitted from the airtight container is emitted are joined.

9. The discharge lamp device according to any one of Claims 1 to 8, wherein:

the holder includes an empty section that is provided at a side at which
5 light emitted from the airtight container is emitted and that has a width
smaller than an outer diameter of the airtight container.

10. The discharge lamp device according to any one of Claims 1 to 9, wherein:

the predetermined interval is in a range from 0.1 mm to 2.0 mm at the
10 shortest.

11. The discharge lamp device according to any one of Claims 1 to 10, wherein:

the discharge medium includes at least xenon gas and a fluorescent
material layer is layered on an inner circumference of the airtight container.